Course Unit Descriptor

Study Programme: Psychology

Course Unit Title: Advanced Statistics

Course Unit Code: 19.OS0009

Name of Lecturer(s): Assistant Professor Tanja Jevremov

Type and Level of Studies: Bachelor Academic Degree

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Summer

Language of instruction: Serbian

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 5

Prerequisites: Basic knowledge on descriptive and inferential statistics

Course Aims:

a) Introducing students:

- to complex statistical concepts, constructs, and operators which are used in psychology studies
- to complex statistical thinking necessary to understanding psychological phenomena and processes

b) Train students:

- to choose methods of statistical analyses
- to use statistical programs for data analyses
- to understand multiple relations among variables as an assumption for studying multivariate analysis

Learning Outcomes:

At the end of this course, students are expected to be prepared:

- to choose adequate statistical methods for research plots which are frequently used in statistical investigations with larger number of variables and/or multiple measures
- to transform data in order to adjust them for the adequate model of statistical analysis
- to carry out data analyses in the specified statistical programs
- to interpret results of data analyses

Syllabus:

Theory

I Simple linear regression analysis; II Special problems in correlations among variables; III Multiple regression analysis; IV Univariate analysis of variance; V Multivariate analysis of variance, VI Analysis of variance with repeated measures; VII Explorative data analysis (visualization); VIII Selection of the methods for data analysis (statistical advisors)

Practice

Conducting the statisical analysis using adequate statistical software and interpretation of the results

Required Reading:

Petz, B. (2004). Osnovne statističke metode za nematematičare. Jastrebarsko: Naklada Slap. (pp. 299-354)

Guilford, J.P. (1968). Osnovi pedagoške i psihološke statistike. Beograd: Savremena administracija. (chapters 13-16, pp. 238-384)

Supplementary literature: StatSoft, Inc. (2018). Electronic Statistics Textbook. Tulsa, OK: StatSoft.			
Weekly Contact Hours: 4 hours weekly	**Lectures:** 8 lectures / themes	**Practical work:** 2 hours weekly	
Teaching Methods: Lectures and exercises			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Active class participation	10	written exam	30
Practical work	20	oral exam	40
Preliminary exam(s)		…….	
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			